

Thrombopoietin receptor agonist romiplostim in refractory thrombocytopenia as a bridging therapy to the second allogeneic stem cell transplantation

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Thrombopoietin (TPO) receptor agonist romiplostim mimic the action of TPO and stimulate the activation, proliferation and maturation of megakaryocytes, resulting in an increase in circulating platelet counts. In this work, we present a patient with a Ph-negative chronic myeloid leukemia (CML) with refractory thrombocytopenia treated with romiplostim as a bridging therapy to the second allogeneic stem cell transplantation (alloSCT). A 56-year old male patient was diagnosed with an atypical Ph-negative CML. One year after the diagnosis he underwent alloSCT from HLA-matched unrelated donor, but had early graft rejection, with severe bleeding diathesis, anemia and thrombocytopenia refractory to transfusion therapy. In addition to daily platelet transfusions (sometimes 2 times per day), he received tranexamic acid and intravenous immunoglobulins. Since the severe thrombocytopenia persisted, romiplostim was introduced as subcutaneous once per week treatment. After two weeks of romiplostim therapy, platelet count increased and the need for platelet transfusions decreased, and he was further followed up in outpatient setting receiving romiplostim as a bridging therapy to his second alloSCT that he received latter. This work describe an unusual use of the TPO receptor agonist as a bridging therapy between two alloSCTs to treat severe refractory thrombocytopenia.